

ORDER

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

1050.111A

1/13/86

SUBJ: NOISE CONTROL PLANNING

1. PURPOSE. This order contains Federal Aviation Administration (FAA) policies and procedures and assigns internal FAA responsibilities in relation to the review of airport noise control plans and programs, including noise abatement procedures and compatible land use controls around airports, in accordance with FAR Part 150, Airport Noise Compatibility Planning. It provides direction to FAA personnel in terms of their responsibilities to review and, where appropriate, assist in the development of local aviation noise abatement procedures.

2. DISTRIBUTION. This order is distributed to the branch level in the Offices of Environment and Energy, Airport Planning and Programming, Airport Standards, Public Affairs, International Aviation, Airworthiness, Flight Operations, Rotorcraft Program Office, Aviation Safety, and Chief Counsel, the Air Traffic Operations, Air Traffic Plans and Requirements, Program Engineering and Maintenance, and System Engineering Services; Metropolitan Washington Airports; branch level in Air Traffic, Airway Facilities, Flight Standards, Airports, Aircraft Certification Divisions, Regional Counsel, and Planning and Appraisal Staffs in the regions; division level in the centers; and a limited distribution to all field offices and facilities.

3. CANCELLATION. Order 1050.111, Noise Control Plans, dated June 9, 1977, is cancelled.

4. BACKGROUND. FAA directly controls aircraft noise at the source by setting noise limits for the certification of aircraft in FAR Part 36 and by enforcing noise compliance regulations in FAR Part 91. The DOT/FAA Aviation Noise Abatement Policy of November 18, 1976, sets forth general policy on noise control plans and proprietary use restrictions. Title I of the Aviation Safety and Noise Abatement Act (ASNA) of 1979 and FAR Part 150, which implements ASNA, provide for the voluntary submission by airport proprietors of Noise Exposure Maps and Noise Compatibility Programs.

5. EXPLANATION OF CHANGES. This revision:

a. Assigns FAA review responsibilities in relation to airport operator noise control planning, including noise abatement procedures, compatible land use around airports and heliports, and proprietary use restrictions.

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b. Provides additional guidance and elaborates upon FAA office and service responsibilities concerning noise abatement and noise control planning around airports and heliports resulting from reorganization within the agency.

c. Expands office, service, and regional responsibilities consistent with the regulatory requirements of FAR Part 150.

6: DEFINITIONS.

a. Airport. Any public use airport, not exclusively used by helicopters, as defined by ASNA and amended by the Airport and Airway Improvement Act of 1982, including:

(1) any airport which is used or to be used for public purposes, under the control of a public agency, the landing area of which is publicly owned;

(2) any privately owned reliever airport; and

(3) any privately ~~owned~~ airport which is determined by the Secretary to ~~enplane~~ annually 2,500 or more passengers and receive scheduled passenger service of aircraft, which is used or to be used for public purposes.

b. Airport Operator. Any person having the operational control of an airport.

c. Affected Units of Local Government. Each public agency and planning agency whose jurisdiction or responsibility is ~~either wholly~~ or partially within the Yearly Day-Night Average Sound Level (LDN) 65 boundary.

d. Citizen or User Participation. Methods by which any member of the general public or airport users can participate in Government decision-making, including exchange of information, opinions, and recommendations.

e. Noise Sensitive Area. Areas where aircraft noise may interfere with existing or planned use of the land. Whether noise interferes with a particular use depends upon the level of noise exposure and the types of activities which are involved. Residential neighborhoods, educational, health, and religious structures and sites, outdoor recreational, cultural, and historic sites may be noise sensitive areas.

f. Airport Noise Compatibility Program. That program developed in accordance with FAR Part 150 which includes the measures taken or proposed by the airport operator to reduce existing noncompatible land uses and to prevent the introduction of additional noncompatible land uses within the area.

g. Airport Noise Exposure Map. A scaled, geographic depiction of an airport, its noise contours, and surrounding area developed in accordance with FAR Part 150.

h. FAA Approved Equivalent. A method for identifying, calculating, measuring, developing, or preparing part or all of a noise exposure map where that method differs from the methods, specifications, or criteria required by Part 150. AEE must approve the use of equivalents.

i. Land Use Planning. A comprehensive planning activity carried out by State or local government, for all areas under its jurisdiction either wholly or partially within the 65 LDN noise contour, to identify the optimum uses of land and to serve as a base for the adoption of zoning or other land use controls.

j. Compatible Land Use. The use of land that is identified as normally compatible with the outdoor noise environment (or an adequately attenuated noise level reduction for the indoor activities involved) at that location, because, the yearly day-night average sound level is at or below that identified for that or similar use under Appendix A of FAR Part 150.

k. Land Use Controls. Measures established by State or local government which are designed to carry out land use planning. The controls include, among other measures: zoning, subdivision regulations, planned acquisition including lease-back, easements, covenants or conditions in deeds or leases, building codes and issuance of building permits, and capital improvement programs, such as establishment of sewer, water, utilities, or other service facilities.

l. Airport Operator Use Restrictions. Action by an airport operator which establishes limits on the use of the airport in terms of the number, noise level, manner or time of aircraft operations at the airport.

m. ~~Restictions~~ Relating To Flight Procedures. Any requirement, limitation, or other action affecting the operation of aircraft, in the air or on the ground.

n. Yearly Day Night Average Sound Level (LDN). The 24hour average sound level, in decibels, for the period from midnight to midnight, obtained after the addition of 10 decibels to sound levels for the periods between midnight and 7 a.m., and between 10 p.m. and midnight, local time, as average over a span of 1 year. LDN is the noise metric determined by the FAA, as directed by the Aviation Safety and Noise Abatement Act of 1979, to be uniformly applied in measuring the noise at airports and the areas surrounding such airports.

o. Noise Attenuation of Buildings. The modification of structures to enhance their properties and characteristics to reduce exterior and interior noise through absorption, transmission loss, and reflection of sound energy.

p. Noise Level Reduction. A measurement of the effectiveness of structural **sheilding** materials to reduce the amount of acoustical energy. For a given structure, **NLR** may vary with the source of frequency content.

7. SCOPE. This order applies to all relevant FAA activities including airport planning, facility planning, construction, aircraft flight rules, and air traffic control procedures.

8 POLICY. FAA encourages efforts to control noise and establish compatible uses of land around airports using FAR Part **150**, and around heliports in guidance documents. Airport operators may develop and submit noise exposure maps and noise compatibility programs which consider alternative actions to control noise. All possible measures to reduce noise should be considered before airport restrictions are proposed. Airport operators are responsible for taking the lead in local aviation noise control plans including land use planning and the establishment of land use controls. FAA does not have land use control authority or responsibility; this responsibility and authority rests with State, and, local governments, particularly those who are also airport operators.

a. FAA shall:

(1) Provide for the reduction of aviation noise impact to the extent feasible, consistent with safety and the needs of the national air transportation system.

(2) Encourage development of noise **compatibility** programs and cooperate with airport operators, affected units of **local government**, airport users, and other interested parties in development and implementation of such programs found acceptable under FAR Part **150**.

(3) Advise airport operators as to how airport use restrictions may affect the national air transportation system.

b. FAA shall not endorse airport use restrictions:

(1) That have not had prior FAA, public, and user review pursuant to or consistent with Part **150**.

(2) Which are considered unsafe, unjustly discriminatory, or incompatible with efficient management of navigable airspace.

(3) Which pose an undue burden on interstate or foreign air commerce.

(4) Which do not provide significant noise relief for noncompatible land uses.

(5) Which are not supported by an appropriate noise impact analysis.

9. RESPONSIBILITIES.

a. The regions shall:

(1) Work with airport operators, in cooperation with airport users, affected units of local government, and citizens by providing guidance and technical assistance in preparation of noise exposure maps and noise compatibility programs that conform to Part 150. Provide noise compatibility information and compatible land use criteria and guidance to all affected parties.

(2) Receive and conduct **indepth** evaluations of submitted noise exposure maps and noise compatibility programs submitted in accordance with Part 150, coordinating with APP and AEE for additional guidance as may be appropriate. Consult with the airport operator and/or **affected** ; local government planning agencies or the public, as appropriate and necessary.

(3) Consider, where appropriate, the establishment of local noise abatement procedures through air traffic control procedures or by installation of electronic approach aids. If noise abatement procedures are consistent with national environmental policy, and may be implemented without creating a safety hazard, without significantly affecting the efficient use and management of the navigable airspace or causing an undue burden on interstate commerce, take appropriate steps to implement or to aid in implementation of such procedures.

(4) Encourage effective land use controls by affected units of local government and other land use planning agency(s), and review local land use plans and controls for compatibility with airport operations to the extent possible. Provide available aviation operation information, as requested, to local agencies and local units of government.

(5) Cooperate with and assist the airport operator by providing available information as requested on: aircraft and engine technical data, safe operational procedures, acceptable and efficient noise abatement actions, citizen and user participation, conducting noise monitoring and modeling, and the development of noise compatibility programs.

(6) Subject to program fiscal constraints, provide financial assistance through appropriate grant programs and technical assistance in the development of noise exposure maps and the implementation of noise compatibility programs.

(7) Require assurance from airport operators, in connection with grants for airport development, that appropriate action has been or will be taken to restrict the use of land adjacent to or in the immediate vicinity of the airport. Use of such land should be limited to activities and purposes compatible with normal airport operations, including the landing and takeoff of aircraft.

(8) Enforce compliance with representations made by airport operators in grant agreements with respect to land use compatibility and other assurances.

(9) Review proposed airport operator use restrictions and determine if such proposed proprietary use restrictions have the potential to significantly impact interstate or foreign air commerce, or if restrictions may be unjustly discriminatory, unsafe or incompatible with the operation and management of the national air transportation system.

(a) A restriction which has the potential to **significantly** impact interstate or foreign air commerce shall be forwarded promptly to **APP** for headquarters review by **AEE**, including appropriate studies on the impact of the restriction, and a course of action recommended.

(b) Advise the airport operator of agency determinations with respect to the restriction and assist in implementing approved restrictions, when appropriate and where data is available.

(10) Accept or reject noise exposure maps, in coordination with the Washington headquarters, and recommend the Administrator's approval or disapproval of noise compatibility programs.

(11) Evaluate requests from operators for use of equivalent measures and procedures in noise exposure maps and noise compatibility programs.

(12) Review flight procedures proposed for noise abatement purposes for any significant adverse effect upon safety, air commerce, and efficient management of the navigable airspace. Determine whether those flight procedures used in developing noise exposure maps and/or noise compatibility programs are acceptable for noise abatement purposes. Current guidance on acceptable noise abatement departure procedures is contained in FAA Advisory Circular **91-53**, Noise Abatement Departure Profile; the Director of Flight Standards is the final approval authority for departure procedures that differ from those contained in AC **91-53**.

(13) Upon approval of noise compatibility programs, apply the appropriate procedures to implement noise abatement measures which are within the purview of the FAA and are within available resources. Advise **APP** and **AEE** of all regional determinations regarding noise abatement procedures and airport operator use restrictions. Also advise **APP** and **AEE** of significant developments in the program relating to noise compatibility planning, land use controls, and airport operator use restrictions.

(14) Designate a noise abatement office or officer and develop appropriate mechanisms for coordinating noise control activities. The noise abatement office or officer assists Flight Standards in the preparation of environmental analysis of new or amended operation specifications that may significantly change the operational environment of an airport. The region will inform **AEE** of the name, routing symbol, and telephone number of the regional noise abatement office or officer.

b. The Aircraft Certification Directorates (ACE, ~~ANM~~, ~~ANE~~, ~~ASW~~) shall:

(1) Perform national headquarters staff functions relative to the aircraft, aircraft engine and propeller type certification, production certification, and original airworthiness certification programs as required under Order **8000.51**, Aircraft Certification Directorates.

(2) Determine compliance with the applicable noise standards that relate to their area of airworthiness authority. Regulatory aspects of the noise standards, technical guidance, and approval of equivalent means of compliance will continue to be the responsibility of the Office of Environment and Energy as detailed under Order **8000.51**, Aircraft Certification Directorates.

(3) Confirm that all noise certification levels for aircraft certificated in the respective directorate have been forwarded to the Office of Environment and Energy within **30** days of certification as required by Order **8110.35A**, Management of a Historical Database on Aircraft Noise Certification.

c. The Office of Airport Planning and Programming (**APP**) shall:

(1) Develop directives for the Airport Improvement Program to the extent authorized by statute for carrying out the policies of Part **150**, Airport Noise Compatibility Planning, as detailed in Order **1050.11A**, Noise Control Planning.

(2) Serve as the Washington headquarters contact point for the regions during review of noise exposure maps and noise compatibility programs by **AEE**, **AGC**, and other offices, as appropriate.

(3) Provide staff advice to the regions on requirements and procedures for implementing FAR Part **150**, Airport Noise Compatibility Planning.

(4) **Receive** and **review** headquarters copies of noise exposure maps and noise **compatibility programs** from the regions.

(5) Coordinate the review of noise exposure maps and noise compatibility programs with **AEE**, **AAT**, **AVS**, **AGC**, and other appropriate offices, provide headquarters comments back to the regions, coordinate final headquarters concurrences on programs and forward them to the Administrator for approval.

(6) Develop and implement program guidance designed to achieve compatibility between aviation impacts and land use activities.

(7) Within statutory authority and funding availability, fund and establish priorities for those aspects of noise compatibility programs which are eligible for program assistance.

(8) Obtain land use compatibility assurances, provide for compliance with representations from airport proprietors where airport grants are involved, and develop guidance for compliance with these representations.

(9) Provide guidance in awarding grants and, as appropriate, award grants for noise compatibility planning to airport proprietors, and cooperate in the development of noise compatibility maps and programs.'

(10) Coordinate significant airport noise compatibility activities with all appropriate offices.

d. The Office of Environment and Energy (**AEE**) shall:

(1) Be responsible for agency noise policy.

(2) Develop and issue technical guidance on noise measurement, prediction and impact, and noise land use compatibility planning for ' airports and heliports.

(3) Make **technical decisions** on the use of the Integrated Noise **Model** or equivalent **methodologies**.

(4) Provide guidance on agency policy, in coordination with **APP**, **AGC**, and other affected offices, regarding specific proposed airport use restrictions which have the potential to significantly impact interstate or foreign commerce.

(5) Make technical and policy evaluations concerning whether an action constitutes an undue burden on interstate or foreign commerce, in coordination with **AGC**.

(6) Review and evaluate noise exposure maps and noise compatibility programs in coordination with **APP** and **AGC**, and comply with all requirements as contained in FAR Part **150**, Airport Noise Compatibility Planning.

(7) Review regional recommendations to the Administrator for approval or disapproval and submit comments to **APP**. May recommend rescinding determination of approval (for cause) on any Part **150** noise exposure map or noise **compatibility** program, in coordination with **APP** and **AGC**.

(8) Review, evaluate, and revise FAR Part **150**, Airport Noise and Land Use Compatibility Planning, as necessary.

(9) Develop recommendations and guidance for noise attenuation in the construction of new buildings and in existing public and residential buildings.

(10) Develop an aircraft operational noise abatement data base in support of the most effective noise abatement technology available.

(11) **Develop** noise prediction and human response evaluation tools for use in support of noise control activities.

(12) In coordination with Flight Operations and the Aircraft Certification Directorates, review and evaluate existing noise abatement/operational procedures and develop simulation tools and techniques for curved path approach and optimized flap/thrust control procedures. Develop recommendations and guidelines for use of operational procedures.

(13) Coordinate significant noise abatement research activities including related aircraft safety research activity both internally and interagency.

(14) Develop environmental training courses, as appropriate, to carry out the policies of Part **150**, Airport Noise and Land Use Compatibility Planning, and other environmental **programs**.

(15) Maintain communications with all those involved in noise compatibility planning.

(16) Provide staff advice to the regions on requirements and procedures for implementing FAR Part **150**, Airport Noise Compatibility Planning.

(17) Coordinate all significant airport noise compatibility activities with all appropriate offices.

e. The Air Traffic Operations Service (ATO) shall:

(1) Provide guidance for aircraft procedures related to air safety, efficient use of airspace, profile descent, preferred arrival, departure and preferential/priority/rotational runway systems.

(2) Administer programs to advise users of visual approach procedures (plates), and published arrival/departure procedures, by appropriate media, e.g., Notices to Airmen and Letters to Airmen.

(3) Coordinate all significant aircraft noise abatement procedural **activities** with all appropriate offices.

f. The Office of Flight Standards (AFS) shall:

(1) Evaluate and make decisions in conjunction with the regional offices, as appropriate, concerning safety factors for flight operational procedures such as thrust reduction or maximum climb on takeoffs, curved or segmented approaches, segmented glide slopes or higher segmented glide slope angles and glide slope intercept altitudes on approaches. The Director of **AFS** is the final approving authority for departure procedures that differ from those contained in AC **91-53**.

(2) Advise users through appropriate media of noise abatement procedures and regulations.

(3) Encourage noise abatement procedures for incorporation as part of pilot training and certification, as well as in development of standard operational procedures for airports.

(4) Prepare environmental assessments (**EA**) for new or amended operation specifications that may significantly change the operational environment of an airport in accordance with Appendix 4 of Order **1050.11D**, "Policies and Procedures for Considering Environmental Impacts." The principal field inspector is responsible for obtaining the necessary information for the **EA** such as, type of equipment, airports involved, time and frequency of operations anticipated from the air carrier.

(5) Coordinate significant noise abatement activities with all **appropriate** offices.

g. The Rotorcraft Program Office (ARO):

(1) Guides, oversees, and coordinates all agency rotorcraft programs and activities.

(2) Develops, establishes, and coordinates agency rotorcraft program goals.

(3) Develops, manages, and maintains a comprehensive Rotorcraft Program Plan that meets all agency goals for rotorcraft matters and is compatible with approved agency policies and plans.

(4) Makes recommendations concerning rotorcraft programs to the Administrator and appropriate Associate Administrators.

(5) Obtains from the cognizant organizations and includes in the Rotorcraft Program Plan resource requirements for the accomplishment of approved rotorcraft programs and projects in accordance with goals and objectives identified in the Rotorcraft Program Plan.

(6) Serves as the FAA technical spokesperson and provides coordinated agency interface with the Congress, other departments and agencies, U.S. and foreign industry, and the worldwide rotorcraft community.

(7) Recommends, reviews, and coordinates projects and programs proposed to be initiated to fulfill agency goals and objectives of the Rotorcraft Program Plan.

(8) Monitors and coordinates regional and center rotorcraft activities.

(9) Serves as the FAA focal point for gathering, evaluating, and disseminating rotorcraft information.

(10) Guides and coordinates the issuance of agency rotorcraft regulatory actions, including issuance of directives concerning helicopter programs.

(11) Establishes requirements for research and development efforts; reviews and coordinates proposed research and development projects to meet the requirements; reviews progress towards meeting the requirements, and recommends changes as necessary.

(12) Participates with technical program offices in identifying air navigation and communication requirements for rotorcraft in the National Airspace System.

(13) Assists technical program offices in identifying the appropriate air traffic procedures and parameters to accommodate rotorcraft operations in the National Airspace System.

(14) Maintains a continuing liaison with DOD, NASA, and the rotorcraft industry to assess the impact of rotorcraft developments on agency programs.

(15) Represents the Associate Administrator for Aviation Standards and the Administrator on rotorcraft program matters.

(16) Coordinates significant noise compatibility activities as they relate to existing and new heliports with all **apropriate** offices.

h. The Office of Public Affairs (APA) shall publicize and develop **award'programs** for commendable noise control activities.

i. The Office of International Aviation (AIA) shall, as appropriate, maintain liaison and communication with the Department of State and foreign governments involving circumstances where noise control programs and airport use restrictions may have an impact on interstate or foreign air commerce.

3. The Office of the Chief Counsel (ACC) and Regional Counsel shall:


(1) Provide legal advice with respect to noise exposure maps, noise compatibility programs, and proposed airport use restrictions.

(2) Submit appropriate Federal Register notice for FAR Part **150** noise exposure maps and noise compatibility programs.

(3) Consult with appropriate offices in the regional evaluation of noise exposure maps and noise compatibility programs.

10. FUNDING. Funding requirements resulting from implementation of' this order shall be justified and authorized in accordance with existing budgetary and fiscal policies.

11. AUTHORITY TO CHANGE THIS ORDER. The Director of Environment and Energy is authorized to issue changes to the order which do not affect policy or an assignment of responsibility.


Donald D. Engen
Administrator